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ON THE SUBJECT OF PSEUDO-TUBERCULOSIS IN THE MONKEY

by

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Translation of an article from Bulletin De L'Academie Medicale De Paris, Vol. 136, 1942, pp. 637-638.

In a recent note, J. Verge and Placidi [Note 1] have reported a case of pseudo-tuberculosis in a Macaque (Macacus rhesus). They emphasize that this ailment is found rarely in the monkey.

[Note 1]: C. R. de la Soc. de biol., 1942, No. 136, p. 483.

It may be true that we find only a few authentic observations of pseudo-tuberculosis in this animal; however, this ailment is not as rare as Verge and Placidi indicate.

From 1931 to 1942, we have revealed 14 cases in monkeys belonging to the following species: one chimpanzee (Pan satyrus [L.J]), 4 arabian baboons (Papio hamadryas [L.J]), 2 sphinx baboons (Papio papio [Desmarest]), 2 vervet guenons (Cercopithecus aethiops [L.J]), one ape (Macaca sylvannus [L.J]), 3 rhesus macaques (Macaca rhesus Aud.), one crab eating macaque (Macaca irus F. Curvier). In all the cases, it was a matter of autopsy findings. All the animals had been cachectic and had lesions, which at first made us think of tuberculosis, which is so frequently found in monkeys. The characteristics of the lesions were: peritoneal serofibrinous effusion, more or less abundant; tubercles varying in size from pin head to hazel-nut, found on the liver, the spleen and sometimes on the lungs; and hypertrophy of the mesenteric ganglions. The majority of the tubercles and the adenitis contained yellowish white pus which, under microscopic examination, showed not acid resistant bacilli but irregularly stained Gram negative coccobacilli.

The cultures made from these lesions regularly produced the coccobacillus of Vignal and Malassez: Corynebacterium pseudotuberculosis. In all cases, the identification of the microorganisms thus isolated was made not only by their morphological, cultural and

biochemical characteristics but also by agglutination tests with an antipseudo-tubercular serum.

The pathogenicity of the majority of the stocks was tested on guinea pigs, rabbits and sometimes pigeons. The subcutaneous inoculation of one cc of a 24 hr. old broth culture kills a guinea pig in 10 to 15 days. At autopsy we find typical pseudo-tuberculosis lesions. The rabbit is very sensitive to an intraperitoneal or intraveinous inoculation of 0.01 cc of a 24 hr. old broth culture. It dies in 10 to 12 days showing generalized pseudo-tubercular lesions. The pigeon, which gets an intramuscular injection of one cc of a 24 hr. old culture, dies in 7 to 8 days, with numerous tubercles on the liver and the spleen.

What is the origin of this ailment? Possibly it could be attributed to the rodents (rats), so numerous in our establishments, which could have carried the infectious agent to a guinea pig colony in the monkey house. In the guinea pig, pseudo-tuberculosis prevails in an endemic state.

In summary, if autopsies are performed on all the monkeys that die in the zoos, as the authors perform them systematically, pseudo-tuberculosis will be found often enough. Experimentally, monkeys are very receptive to the germ of Vignal and Malassez as is shown by the experiments of Klein [Note 2] and Saenz [Note 3].

[Note 2]: Klein, Zentr. Bakter., 1899, No. 26, p. 260.

[Note 3]: Saenz, C. R. de la Soc. de biol., 1930, No. 104, p. 1189.